

# The Balkan Environment Center and the Balkan Wildland Fire Observatory

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# The Balkan Environment Center (BEC)

## Environmental Monitoring

Environmental quality, threats, pressures and impacts  
(e.g. erosion, floods,...+ fires)

Monitoring  
Indicators

Operational - Real time monitoring

Decision  
Support

Early Warning

Risk  
Assessment

# The Balkan Wildland Fire Observatory

## Preparatory actions

- Prepare Cooperation Agreement between the UNISDR Regional Fire Monitoring Center (RFMC) and the '*Balkan Wildland Fire Observatory*'
- Set Unit objectives
- Personnel selection
- Search for funding opportunities

## Existing facilities and expertise

- Available facilities
- Related expertise

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# Unit Objectives

- GENERAL: to promote 'Forest Fires - RS/GIS related' research and training in the Balkan region
- To develop 'Forest Fires - RS/GIS' web-based services\* with updated information in relation to fire danger estimation, burned area mapping and post-fire recovery monitoring
- To promote Public Participation GIS (PPGIS) as a tool to enhance communication between the different interested parties (forest service, fire service, etc.)

\*Web site to be developed on the existing BEC e-platform

# Unit Objectives (2)

- To provide expert advice and knowledge transfer
- To assist 'Capacity building' in the region with:
  - the organisation of (and/or participation in) national and international training courses and long-life training programs
  - the organisation (and/or support) of seminars, workshops, and conferences on the application of Remote Sensing and GIS in forest fire management
- To promote networking and collaboration between interested parties
- To represent the region in the GOFC/GOLD Fire IT

# Personnel

## **Permanent Staff**

- I. Gitas (Scientific Coordinator)
- A. Dimitrakopoulos (Advisor Forest Fires)
- G. Mallinis (Advisor Remote Sensing/GIS)

## **Interim-Contract staff** (Non-Permanent)

- I. Mitsopoulos (Senior Researcher and International collaboration)
- H. Minakou (Researcher, Administration, International collaboration)

## **Post Graduate students**

- Young researcher
- Young researcher

# Funding opportunities

Project proposals submitted for funding:

- National Observatory of Forest Fires (Hellenic Ministry of Environment Energy and Climate Change – Green Fund) Proposed Budget: 210K
- AFIS - Adriatic cross-border wildfire information system (IPA Crossborder Cooperation Programme) Proposed Budget: 600K

To be submitted soon

- Territorial Cooperation Programme GR-BL





# The National Observatory of Forest Fires

## Objectives:

- Development, Mapping and Evaluation of an Empirical Forest Fire Danger Index for Northern Greece
- Forest Fuel Type Mapping at National Level
- Operational Burned Area Mapping at National Level
- Knowledge transfer and dissemination to the surrounding Balkan countries



# AFIS - Adriatic cross-border wildFire Information System

## Aim:

- The aim of the project is to improve and strengthen institutional capabilities related to the protection, prevention and monitoring of wildfires through the application of GIS and Remote Sensing

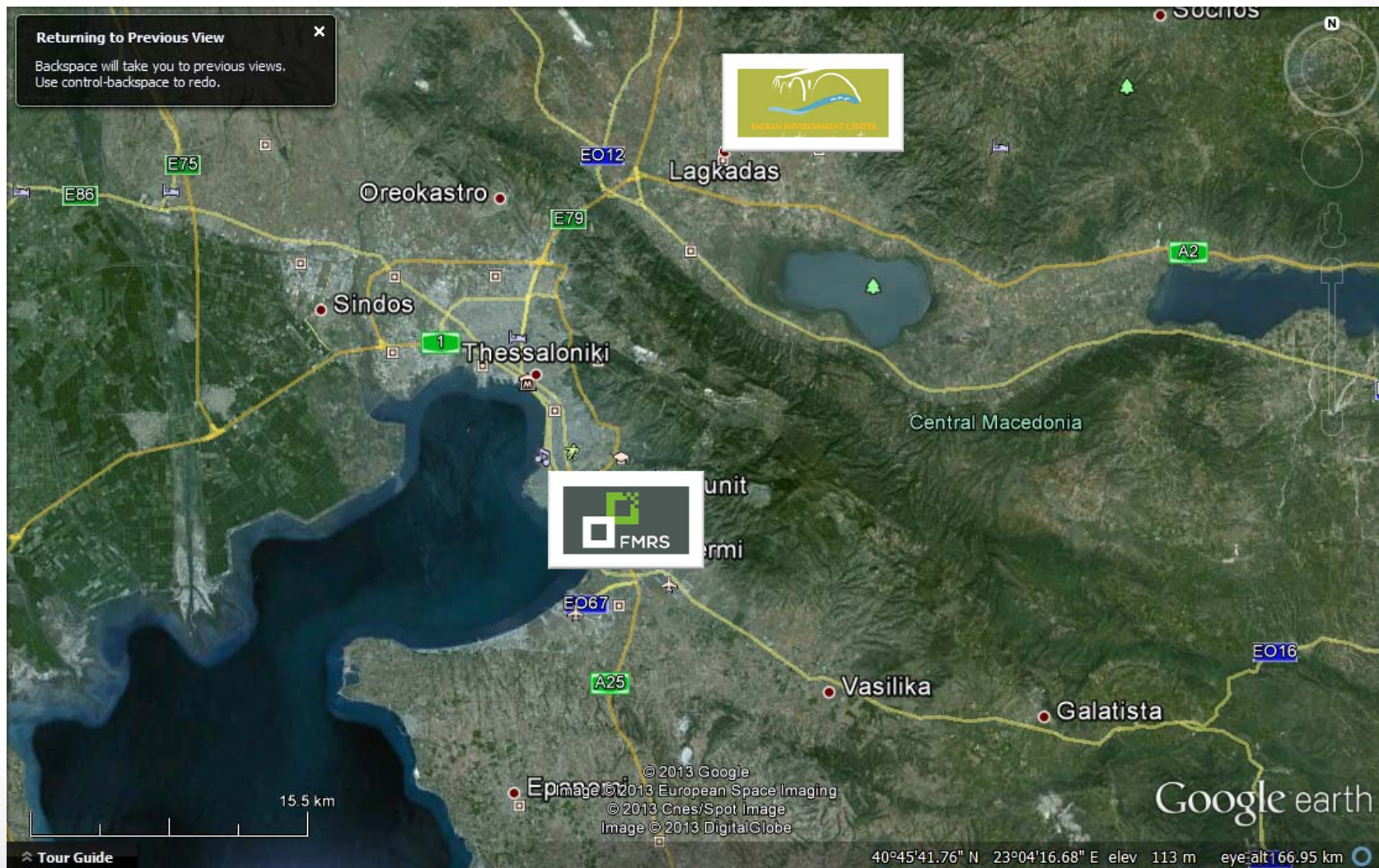
## Specific objectives include:

- To develop a common (regional) fire risk index by using EO data and GIS
- To develop and test a common (regional) post fire monitoring assessment methods
- To develop and test a common (regional) system for fire damage assessment considering economic losses, social impact and the impact on the environment
- Also to promote institutional cooperation in the Adriatic region

## Participants

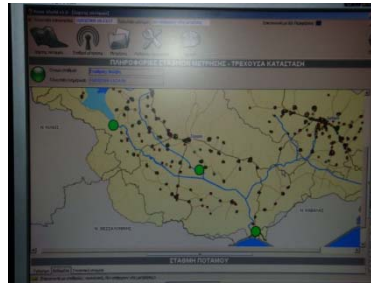
- Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Serbia, Slovenia

# Facilities





# Facilities



# **Relevant Expertise**



**Laboratory of Forest  
Management & Remote  
Sensing**

**School of Forestry & Natural  
Environment  
ARISTOTLE UNIVERSITY OF  
THESSALONIKI (AUTH)**

**Tel: +30 2310 992699, Fax:  
+30 2310 992731  
E-mail: [igitas@for.auth.gr](mailto:igitas@for.auth.gr)**

# Research Team



The Laboratory currently  
**employees 17 people:**

3 - Permanent Academic Staff

1 - Permanent Researcher

1 - Secretary

4 - Research Associates and

8 - Post-graduate students (MSc,  
PhD)

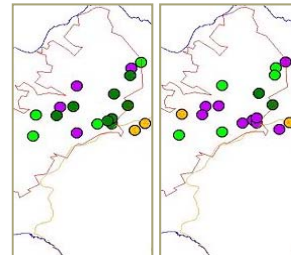
# Activities



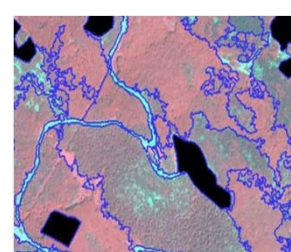
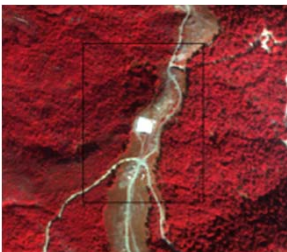
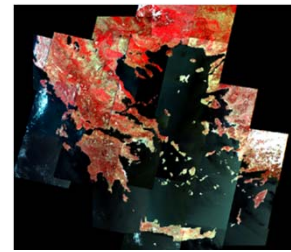
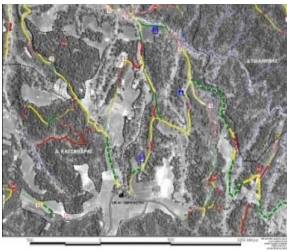
- Research
  - Remote Sensing, GIS, Forest Fires, Land cover/use mapping, Forest mapping, Forest Management, Soil erosion, Landscape Ecology
- Education
  - graduate and postgraduate courses
- Dissemination of knowledge to the society
  - operational applications, lectures, seminars, national and international conferences, networks



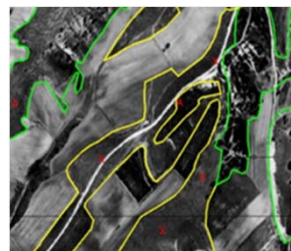
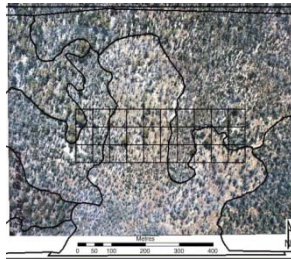
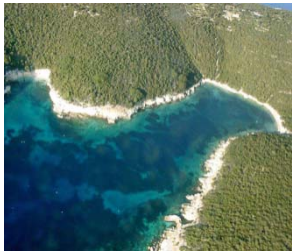
# Research priorities



- Applications in forest fire research
- Forest management
- LULUCF - Kyoto protocol (Forest species mapping, biomass estimation)
- Land cover/use mapping
- Landscape ecology
- Soil erosion
- Environmental degradation assessment
- Ecosystem dynamics

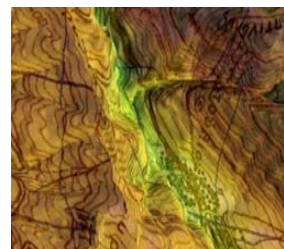
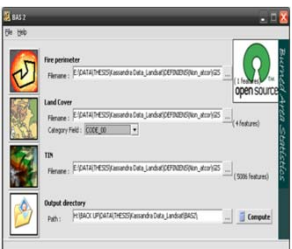
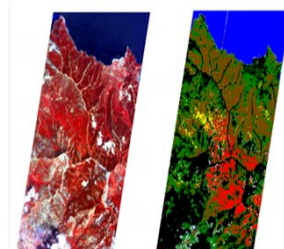


# Educational activities



The Unit offers the following undergraduate and postgraduate courses :

- Forest Aerial Photography
- Environmental Remote Sensing
- Geographic Information Systems
- Forest Management, Applied Forest Management, Compilation of Management Plans
- Forest Land Mapping

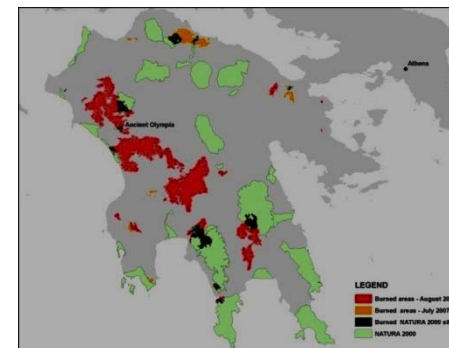
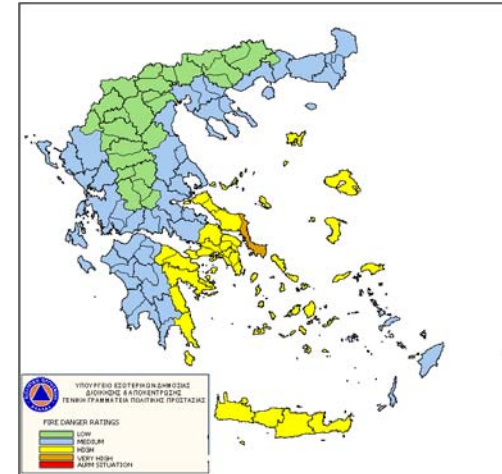
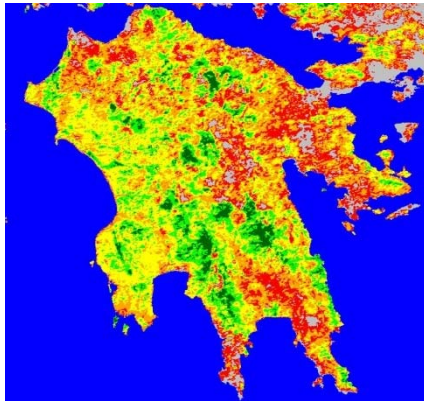


Also, it offers lectures and seminars in cooperation with public and private organizations, institutes, universities and companies.

# Collaboration with International organisations and Greek end-users

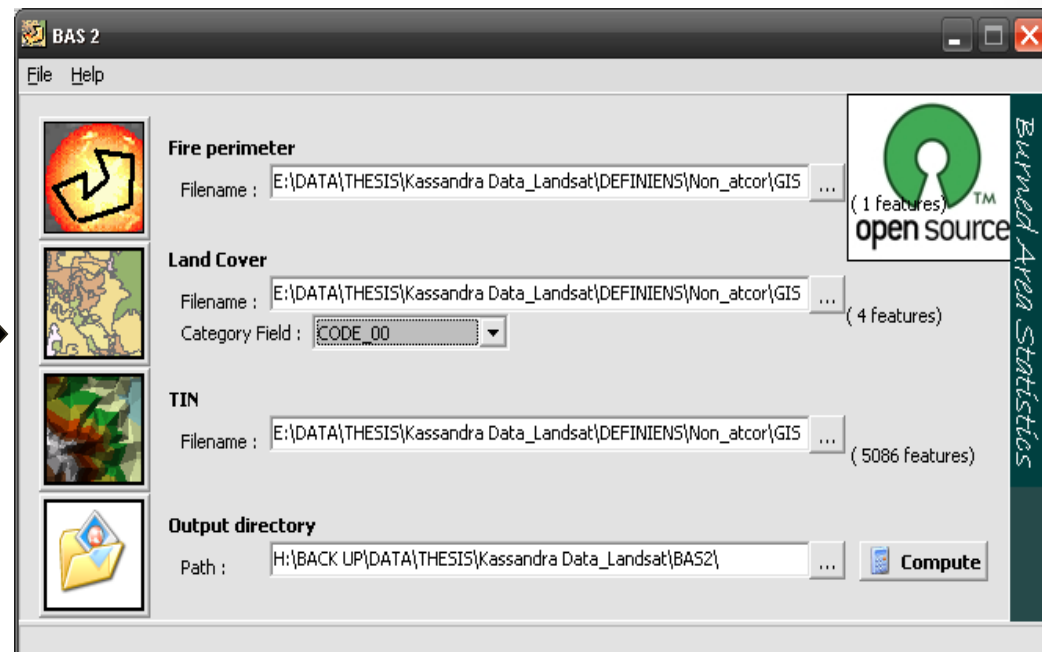
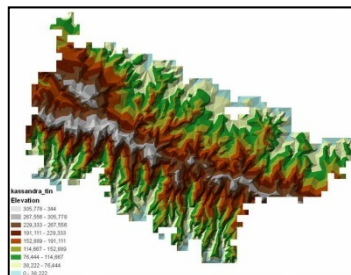
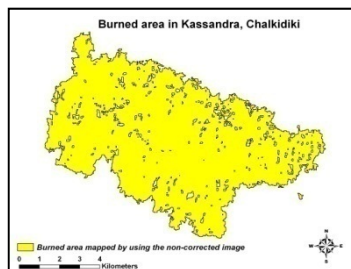
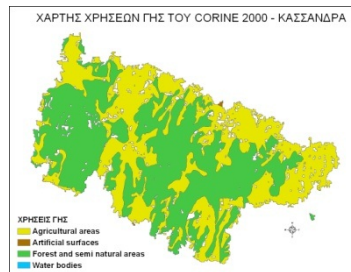


# Involvement in operational applications of RS



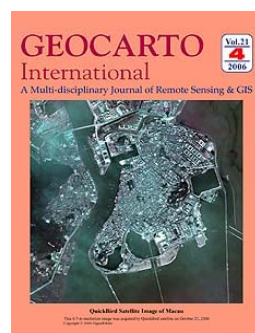
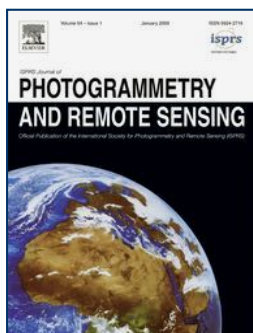
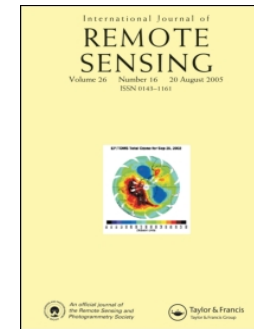
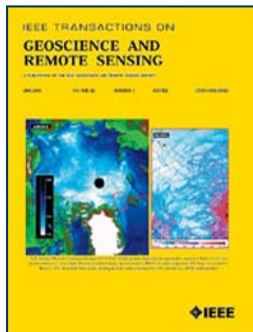


# Open source GIS software development



# Publications in impact factor journals

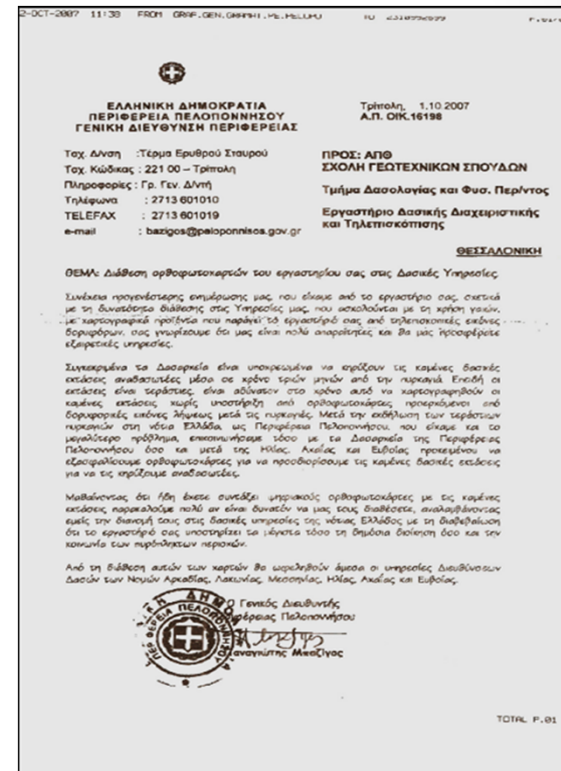
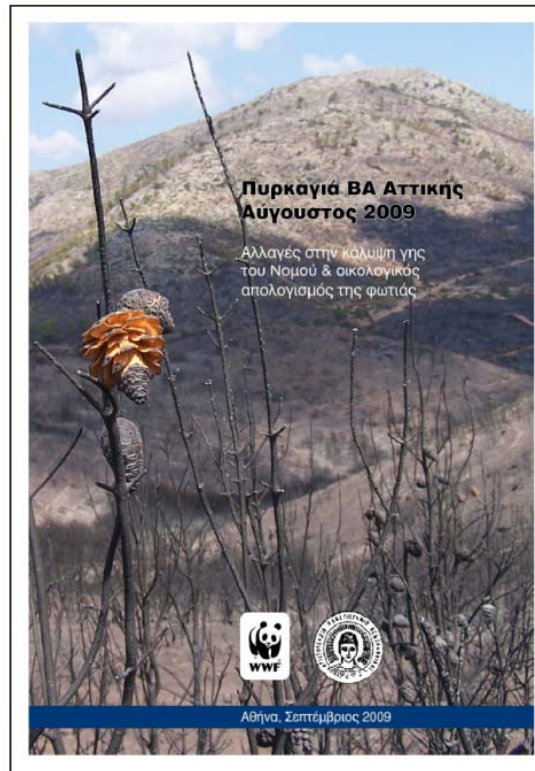
Members of the Laboratory have published the results of the research conducted in the Laboratory in many international peer-review journals:



# Publicity

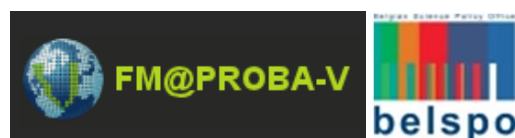
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# Practical value of our work





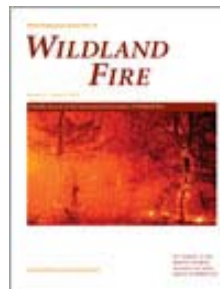
# A selection of granted research projects



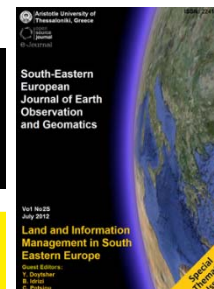
# Other activities

- The unit is a member of EARSeL - chairing the EARSeL Special Interest Group on Forest Fires (EARSeL – FFSIG)
- Members of the group :
  - are editors / guest editors in international journals and conference proceedings
  - are members of the scientific or organising committee of different national and international events
  - participate in national (Civil protection, Ministry of Environment, Energy and Climate Change) as well as international committees (FAO FRA RSS 2010)

## Journals



## eJournals



## - Conf. Proceedings



**Thank you very much for your attention**